

66. (Twice Amended) The compound of claim 1 or 44, wherein the [residue of the] compound of Formula I is also linked to a group comprising Gd-157.

68. (Twice Amended) A [pharmaceutical] composition comprising a compound of any one of claim 1-53 or 65-67 and a pharmaceutically acceptable carrier.

### Remarks

#### Rejections Under 35 U.S.C. 112

The Office Action rejects claim 68 because it recites a pharmaceutical composition and, according to the office action, the application does not enable the invention described in pending claim 68 for any therapeutic or diagnostic utility. Applicants are confused by this assertion. It is well known that B10 can be used in boron neutron capture therapy which can be therapeutic or diagnostic. It appears that the Examiner merely takes issue with the use of the term "pharmaceutical" in the claims because, the Examiner contends, boron neutron capture therapy does not employ a "pharmaceutical" as that term is conventionally employed. Applicant respectfully disagrees with the Examiner's interpretation of the term. However, since removal of the term from the claim would appear to resolve the Examiner's concern without lessening coverage afforded by the claim, Applicant have removed the claim in a spirit of cooperation in order to have the application more promptly allowed.

To the extent that the Examiner's rejection is couched upon reasoning other than his definition of "pharmaceutical," Applicant respectfully traverses the rejection. The Office Action concedes that the Applicant is entitled to a claim to a method to interfere with the binding between cyanocobalamin and transcobalamin by administration of the claimed compounds, which is exactly how the therapeutic and diagnostic activity is achieved. Other language in the Office Action could be interpreted to suggest that boron neutron capture therapy is not in fact a "therapy." However, the very name of the procedure (boron neutron capture **therapy**) proves just the opposite. Other language indicates that the specification does not show whether any of the claimed compounds will localize to a tumor. However, the background of the specification, on page 7, provides a clear showing that one skilled in the art would reasonably expect the

claimed compounds (which are based on cobalamin) to localize at the site of a tumor. Therefore, Applicants respectfully submit that the claims are fully enabled throughout their scope.

The Office Action rejects claim one on the ground that the term "residue of a compound of formula I" is indefinite. In response, Applicant has removed the term "residue of a compound of formula I" from the claims in a spirit of cooperation to advance this application toward allowance, and to be consistent has also removed the term "residue" in the reference to the B10-containing compound.

The Office Action further rejects claim one on the ground that the claim does not recite the purpose of a, b, c, d, e, f, and g in the recited structure. Applicants respectfully point out to the Examiner that these letters are included in the chemical formulas to provide antecedent basis for later dependent claims that refer to those letters.

The Office Action objects to claim 27 because it depends from claim 25 and, according to the Office Action, claim 25 does not allow for the presence of more than one Q-L-W-Det molecule. Applicant respectfully disagrees because claim 25 indicates that the compound of formula I is linked to "a group of the formula Q-L-W-Det", and it is commonly understood that the term "a" is not meant to be exclusive. Rather, it allows for the presence of additional items modified by the descriptor. Nevertheless, in a spirit of cooperation and in an effort to advance this application more quickly toward allowance, Applicant has amended claim 25 to indicate that the compound of formula I is linked to "one or more" groups of the formula Q-L-W-Det. Applicant maintains its position that the term "a" wherever else used in the claims, allows for the presence of more than one of the recited elements.

The Office Action also states that the abbreviations used in claims 29 and 34 must be spelled out. Applicant has amended the claims to define the abbreviations within these claims.

#### Rejections Under 35 U.S.C. 102

The Office Action rejects claim 1 over Primus, (*Bioconjugate Chem* 7, 532, 1996) which discloses boron containing compounds, on the ground that the term "residue" in claim 1 is so broad as to encompass any boron containing compound. As discussed above, Applicant disagrees with the Examiner's interpretation of residue, but has nonetheless removed the term

residue from the claim in a spirit of cooperation to advance the application more promptly toward allowance.

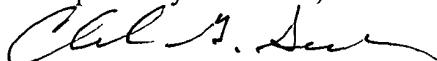
**Information Disclosure Statement**

The Office Action indicates that a number of references submitted with Applicant's Information Disclosure Statement were not considered because they were not received. However, a copy of the postcard from the Patent Office (copy enclosed) indicates that the Mail Room received of all the cited references. Accordingly, Applicant respectfully requests that the references be considered. Enclosed herewith for the Examiner's convenience is a new form 1449 that cites the references for a second time, and copies of the references. Applicant thanks the Examiner for his understanding in this matter.

**Conclusion**

Applicants respectfully submit that this application is now in condition for allowance and earnestly solicit prompt notification to that effect.

Respectfully submitted,



Clark G. Sullivan

Registration No. 36,942

Date: March 13, 2002

King & Spalding  
191 Peachtree Street  
Atlanta, Georgia 30303  
Telephone: 404-572-3513  
Facsimile: 404-572-5145

---

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on March 13, 2002.



Nan Huff

**REPLACEMENT SECTION**

**Related Applications**

*B1*  
The present application claims priority under 35 U.S.C. 119(e) to United States Provisional Patent Application No. 60/159,873, filed October 15, 1999, and under 35 U.S.C. 120 to International Application No. PCT/US00/10100, filed April 15, 2000, designating the United States.

**VERSION OF REPLACEMENT SECTION TO SHOW CHANGES MADE**

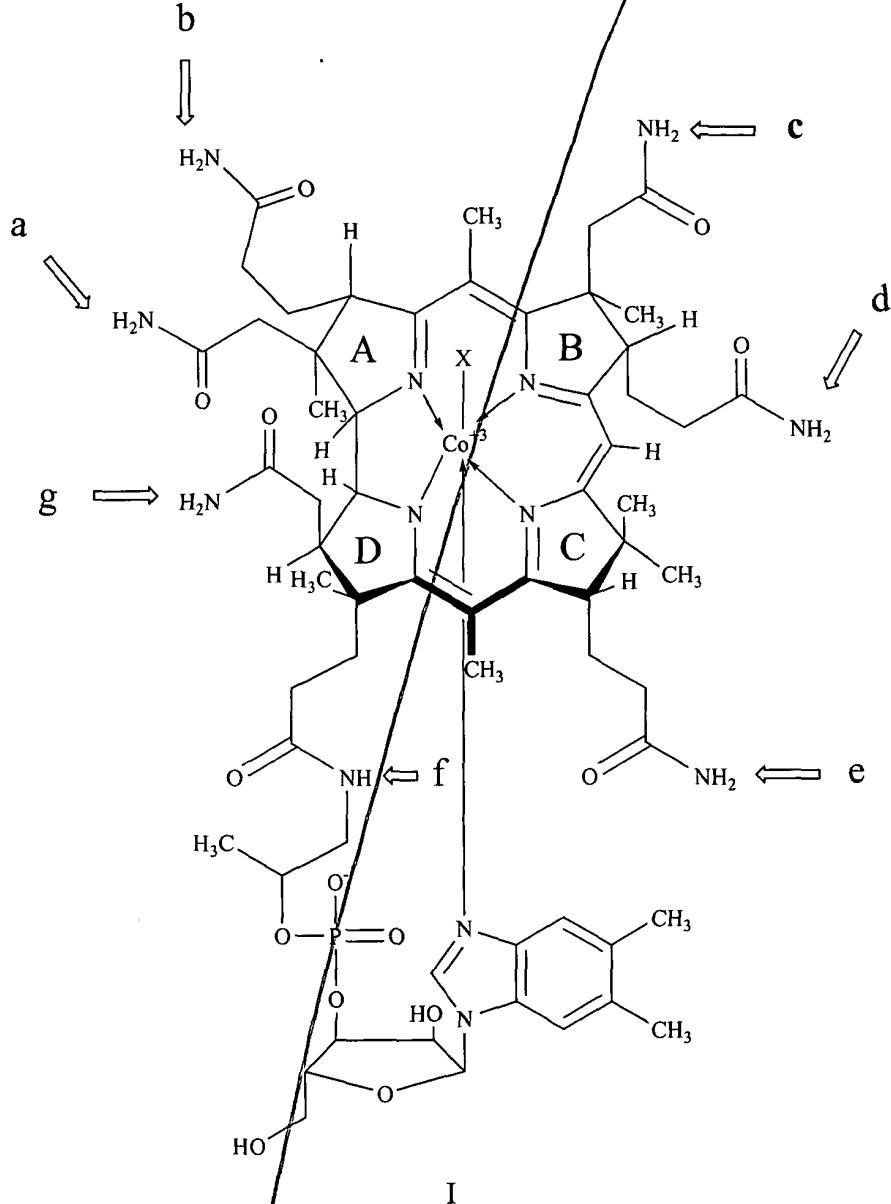
**Related Applications**

The present application claims priority under 35 U.S.C. 119(e) to United States Provisional Patent Application No. 60/159,873, filed October 15, 1999, and under 35 U.S.C. 120 to International Application No. PCT/US00/10100, filed April 15, 2000, designating the United States.

[This application claims priority to U.S. Provisional Application Ser. No. 60/129,733, filed 16 April 1999; and U.S. Provisional Application Ser. No. 60/159,873, filed 15 October 1999.]

REPLACEMENT CLAIM SET

1) A compound of formula I



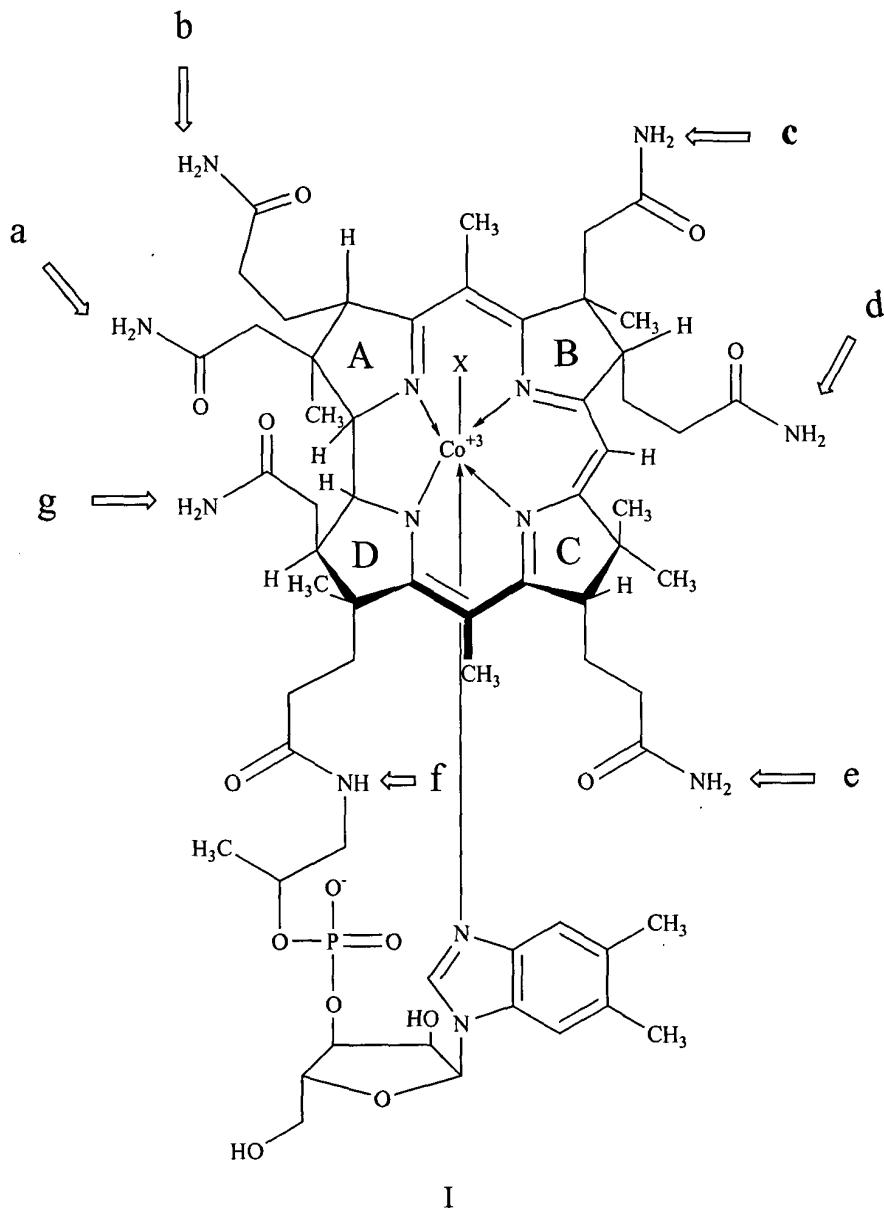
linked to a molecule comprising B-10, wherein X is CN, OH, CH<sub>3</sub>, adenosyl or a molecule comprising B-10; or a pharmaceutically acceptable salt thereof.

- B3
- 2) The compound of claim 1, wherein the molecule comprising B-10 is directly linked to the 6-position of the compound of formula I or is directly linked to the b, d or e-carboxamide group of the compound of formula I.
  - 3) The compound of claim 1, wherein the molecule comprising B-10 is linked by a linker to the 6-position of the compound of formula I or is linked by a linker to the b, d or e-carboxamide group of the compound of formula I.
  - 4) The compound of claim 1, wherein the molecule comprising B-10 is linked to the b-carboxamide group of the compound of formula I.
  - 5) The compound of claim 1, wherein the molecule comprising B-10 is linked to the d-carboxamide group of the compound of formula I.
  - 6) The compound of claim 1, wherein the molecule comprising B-10 is linked to the e-carboxamide group of the compound of formula I.
  - 7) The compound of claim 1, wherein the molecule comprising B-10 is linked to the b-carboxamide group and a second molecule comprising B-10 is linked to the d-carboxamide group of the compound of formula I.
  - 8) The compound of claim 1, wherein molecule comprising B-10 is linked to the 6-position of the compound of formula I.
  - 9) The compound of claim 1, wherein the molecule comprising B-10 contains about 1 to about 20 boron atoms, inclusive.
  - 10) The compound of claim 1, wherein the molecule comprising B-10 is an amino acid, a carbohydrate, a nucleoside or a carborane.
  - 11) The compound of claim 1, wherein the molecule comprising B-10 is o-carborane, m-carborane or p-carborane.
  - 12) The compound of claim 1, wherein the molecule comprising B-10 is o-carborane.
  - 13) The compound of claim 3, wherein at least one linker is of the formula W-A-Q wherein A is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, (C<sub>3</sub>-C<sub>8</sub>)cycloalkyl, or (C<sub>6</sub>-C<sub>10</sub>)aryl, wherein W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl.

- 14) The compound of claim 13, wherein W is NH<sub>2</sub> or COOH and Q is NH<sub>2</sub> or COOH.
- 15) The compound of claim 13, wherein A is (C<sub>1</sub>-C<sub>6</sub>)alkyl.
- 16) The compound of claim 3, wherein at least one linker is about 5 angstroms to about 50 angstroms, inclusive.
- 17) The compound of claim 3, wherein at least one linker comprises a therapeutic radionuclide or a diagnostic radionuclide.
- 18) The compound of claim 17, wherein the therapeutic radionuclide is a metallic radionuclide.
- 19) The compound of claim 17, wherein the diagnostic radionuclide is a metallic radionuclide.
- 20) The compound of claim 17, wherein the diagnostic radionuclide is a non-metallic radionuclide.
- 21) The compound of claim 3, wherein at least one linker is a divalent radical formed from a peptide.
- 22) The compound of claim 3, wherein at least one linker is a divalent radical formed from an amino acid.
- 23) The compound of claim 3, wherein at least one linker is poly-L-glutamic acid, poly-L-aspartic acid, poly-L-histidine, poly-L-ornithine, poly-L-serine, poly-L-threonine, poly-L-tyrosine, poly-L-leucine, poly-L-lysine-L-phenylalanine, poly-L-lysine or poly-L-lysine-L-tyrosine.
- 24) The compound of claim 1, wherein the compound of formula I is also linked to a linker comprising a detectable radionuclide or a therapeutic radionuclide.

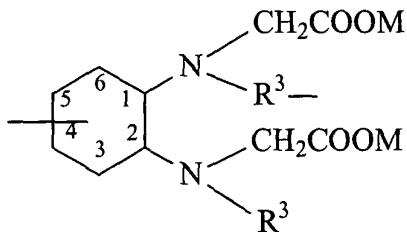
B4

25) A compound of formula I



linked to one or more groups of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein Det is a chelating group comprising Gd-157; L is a linker or absent; and W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl; or a pharmaceutically acceptable salt thereof.

- BL*
- 26) The compound of claim 25, wherein the group of the formula Q-L-W-Det is linked to the b-carboxamide group, d-carboxamide group, e-carboxamide group or the 6-position of the compound of formula I.
- 27) The compound of claim 25, wherein the group of the formula Q-L-W-Det is linked to the b-carboxamide group and a second group of the formula Q-L-W-Det is linked to the d-carboxamide group of the compound of formula I.
- 28) The compound of claim 25, wherein the group of the formula Q-L-W-Det is between about 20 and about 500 angstroms, inclusive, in length.
- B7*
- 29) The compound of claim 25, wherein at least one chelating group is ethylenediaminetetraacetic acid (EDTA); diethylenetriaminepentaacetic acid (DTPA); 1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid (DOTA); 1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraacetic acid (TETA); 1,4,8,12-tetraazacyclopentadecane-N,N',N'',N'''-tetraacetic acid (15N4); 1,4,7-triazacyclononane-N,N',N''-triacetic acid (9N3); 1,5,9-triazacyclododecane-N,N',N''-triacetic acid (12N3); N-[N-[N-[(benzoylthio) acetyl]glycyl]glycyl]glycine (MAG3); or a cyclohexane-based metal chelator (DCTA) of the formula

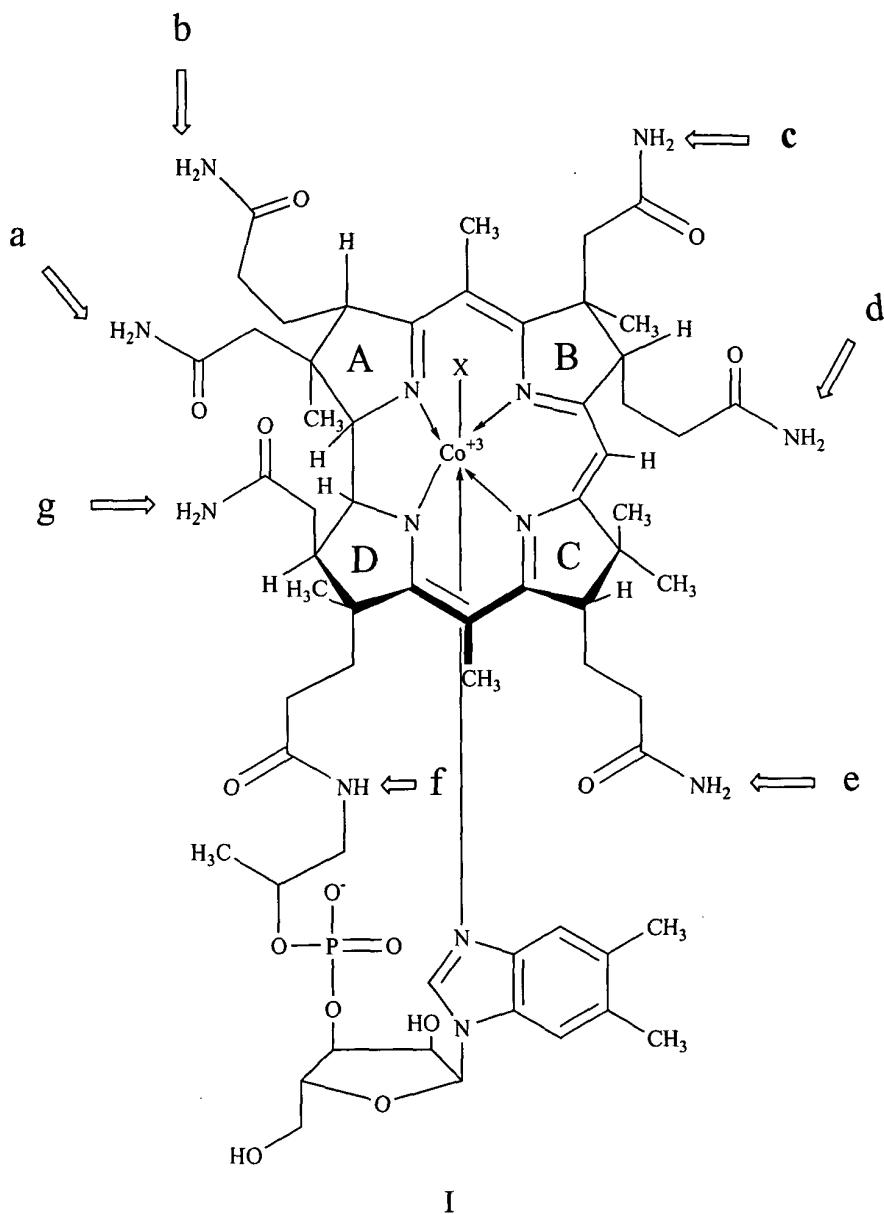


wherein R<sup>3</sup> may be (C<sub>1</sub>-C<sub>4</sub>)alkyl or CH<sub>2</sub>CO<sub>2</sub>-.

- 30) The compound of claim 25, wherein at least one chelating group is diethylenetriaminepentaacetic acid (DTPA) comprising Gd-157.

31) A compound of formula I

B8



linked to a molecule comprising B-10; wherein the compound of formula I is linked to a group of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein

- Det is a chelating group comprising a therapeutic radionuclide or a diagnostic radionuclide;
- L is a linker or absent; and

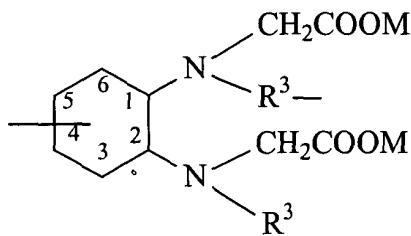
B8  
Conclude

- c) Q and W are each independently  $-N(R)C(=O)-$ ,  $-C(=O)N(R)-$ ,  $-OC(=O)-$ ,  $-C(=O)O-$ ,  $-O-$ ,  $-S-$ ,  $-S(O)-$ ,  $-S(O)_2-$ ,  $-C(=O)-$ ,  $-N(R)-$ , or a direct bond; wherein each R is independently H or  $(C_1-C_6)$ alkyl; or a pharmaceutically acceptable salt thereof.

32) The compound of claim 31, wherein at least one of the radionuclides is  $Tc^{99m}$ ,  $In^{111}$ ,  $In^{110}$ ,  $Gd^{157}$  or  $Y^{86}$ .

33) The compound of claim 31, wherein a molecule comprising B-10 is linked to a b-carboxamide group, d-carboxamide group, e-carboxamide group or the 6-position of the compound of formula I.

34) The compound of claim 31, wherein at least one chelating group is ethylenediaminetetraacetic acid (EDTA); diethylenetriaminepentaacetic acid (DTPA); 1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid (DOTA); 1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraacetic acid (TETA); 1,4,8,12-tetraazacyclopentadecane-N,N',N'',N'''-tetraacetic acid (15N4); 1,4,7-triazacyclononane-N,N',N''-triacetic acid (9N3); 1,5,9-triazacyclododecane-N,N',N''-triacetic acid (12N3); N-[N-[N-[(benzoylthio) acetyl]glycyl]glycyl]glycine (MAG3); or a cyclohexane-based metal chelator (DCTA) of the formula



wherein  $R^3$  may be  $(C_1-C_4)$ alkyl or  $CH_2CO_2^-$ .

35) The compound of claim 31, wherein at least one chelating group is diethylenetriaminepentaacetic acid (DTPA) comprising Gd-157.

36) The compound of claim 31, wherein the molecule comprising B-10 contains about 1 to about 20 boron atoms, inclusive.

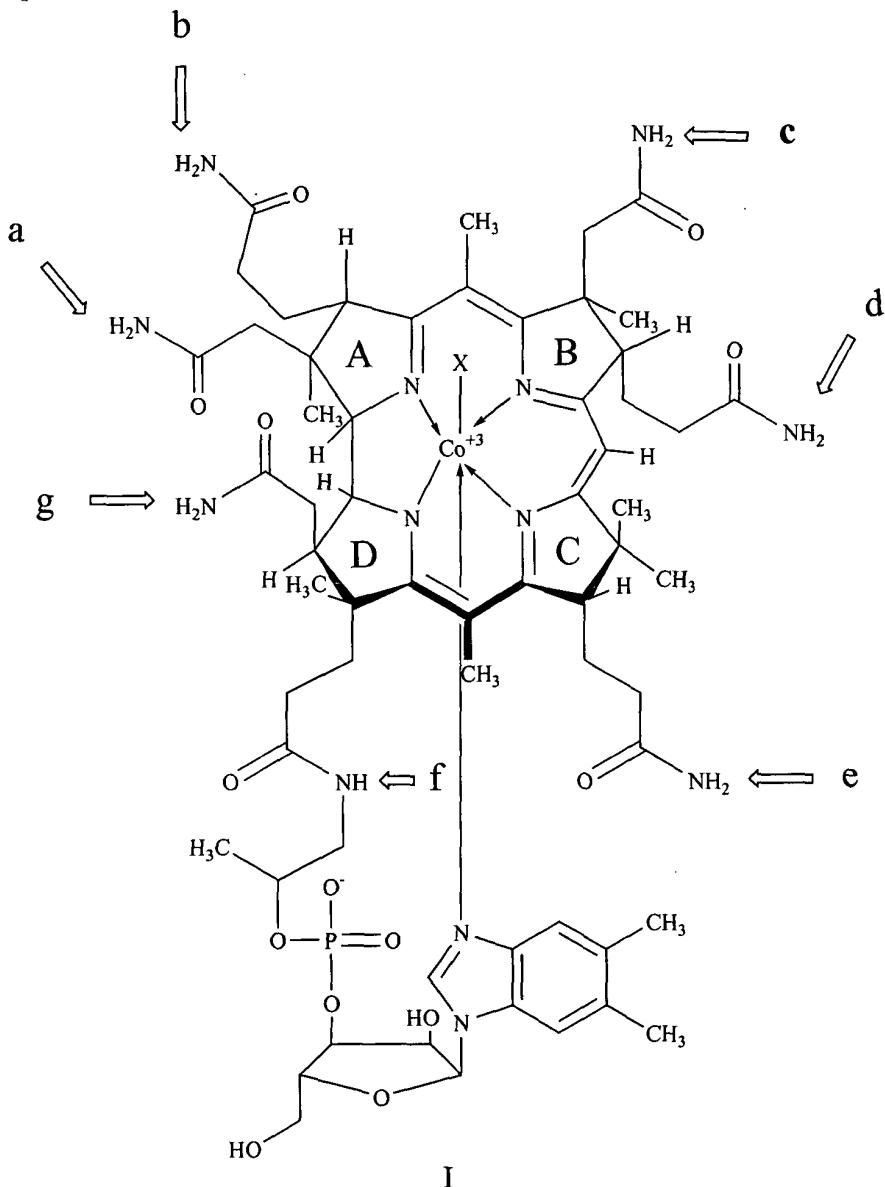
37) The compound of claim 31, wherein the molecule comprising B-10 is an amino acid, a carbohydrate, a nucleoside or a carborane.

- B10*
- 38) The compound of claim 31, wherein the molecule comprising B-10 is o-nido-carborane, m-nido-carborane or p-nido-carborane.
  - 39) The compound of claim 31, wherein the molecule comprising B-10 is o-carborane.
  - 40) The compound of claim 31, wherein the molecule comprising B-10 is directly linked to the 6-position or to the b, d or e-carboxamide group of the compound of formula I.
  - 41) The compound of claim 31, wherein the compound of formula I is linked to the molecule comprising B-10 through a linker.
  - 42) The compound of claim 41, wherein the linker comprises a non-metallic radionuclide.
  - 43) The compound of claim 41, wherein the linker is about 5 angstroms to about 50 angstroms, inclusive.
  - 44) The compound of claim 1, further comprising a detectable radionuclide.
  - 45) The compound of claim 44, wherein the detectable radionuclide is a non-metallic radionuclide.
  - 46) The compound of claim 45, wherein the non-metallic radionuclide is Carbon-11, Fluorine-18, Bromine-76, Iodine-123 or Iodine-124.
  - 47) The compound of claim 44, wherein the detectable radionuclide is directly linked to the compound of formula I.
  - 48) The compound of claim 44, wherein the detectable radionuclide is linked by a linker to the compound of formula I.
  - 49) The compound of claim 48, wherein the linker is of the formula W-A wherein A is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, (C<sub>3</sub>-C<sub>8</sub>)cycloalkyl, or (C<sub>6</sub>-C<sub>10</sub>)aryl, wherein W is -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl, and wherein A is substituted with one or more non-metallic radionuclides.
  - 50) The compound of claim 48, wherein the linker is about 5 angstroms to about 50 angstroms, inclusive.
  - 51) The compound of claim 48, wherein the linker is a divalent peptide or amino acid.
  - 52) The compound of claim 48, wherein the linker is poly-L-glutamic acid, poly-L-aspartic acid, poly-L-histidine, poly-L-ornithine, poly-L-serine, poly-L-threonine, poly-L-

tyrosine, poly-L-leucine, poly-L-lysine-L-phenylalanine, poly-L-lysine or poly-L-lysine-L-tyrosine.

- B11 53) The compound of claim 48, wherein the linker is linked to the 6-position of the compound of formula I or is linked to the a b-, d- or e-carboxamide group of the compound of formula I.

- B12 65) A compound of formula I



linked

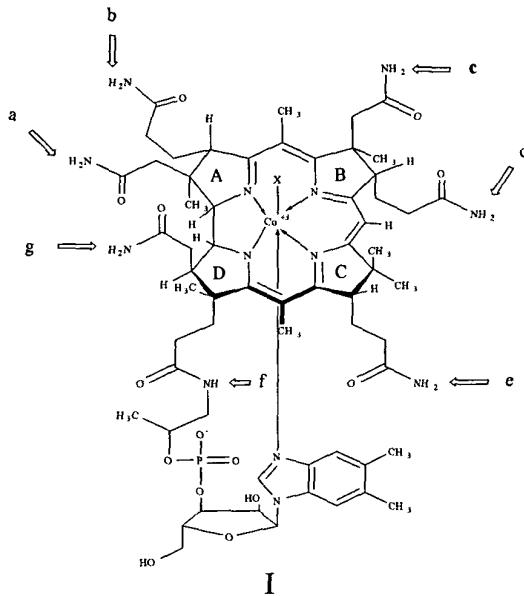
- 3) to a molecule comprising B-10 or a chelating group comprising Gd-157; and

- B12  
Conclude*
- 4) to at least one molecule of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein each Det is independently a chelating group comprising a metallic radionuclide; each L is independently a linker or absent; and each W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -C(=O)-, -N(R)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;  
or a pharmaceutically acceptable salt thereof.
- 66) The compound of claim 1 or 44, wherein the compound of formula I is also linked to a group comprising Gd-157.
- 67) The compound of claim 66, wherein the group comprising Gd-157 has the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein Det is a chelating group comprising Gd-157; L is a linker or absent; and W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl.
- B13*
- 68) A composition comprising a compound of any one of claim 1-53 or 65-67 and a pharmaceutically acceptable carrier.
- 69) A method of treating a tumor in a mammal in need of such treatment comprising administering to the mammal an effective amount of a compound of any one of claim 1-53 or 65-67 in combination with a pharmaceutically acceptable vehicle; and administering neutron capture therapy.
- 70) A method for imaging a tumor in a mammal comprising administering to the mammal a detectable amount of a compound of any one of claim 1-53 or 65-67; and detecting the presence of the compound.
- 71) The method of claim 70, further comprising treating the tumor with neutron capture therapy.

**Version with Markings to Show Changes Made**

Claims 1, 2-8, 24, 25-27, 29, 30, 31, 33, 34, 35, 40, 41, 53, 65, 66, and 68 have been amended as follows:

1. (Twice Amended) A [residue of a] compound of formula I:



linked to [a residue of] a molecule comprising B-10, wherein X is CN, OH, CH<sub>3</sub>, adenosyl or a molecule comprising B-10; or a pharmaceutically acceptable salt thereof.

2. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is directly linked to the 6-position of the compound of formula I or is directly linked to [a residue of ]the b, d or e-carboxamide group of the compound of formula I.

3. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked by a linker to the 6-position of the compound of formula I or is linked by a linker to [a residue of the ]b, d or e-carboxamide group of the compound of formula I.

4. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked to [a residue of ]the b-carboxamide group of the compound of formula I.

5. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked to [a residue of ]the d-carboxamide group of the compound of formula I.

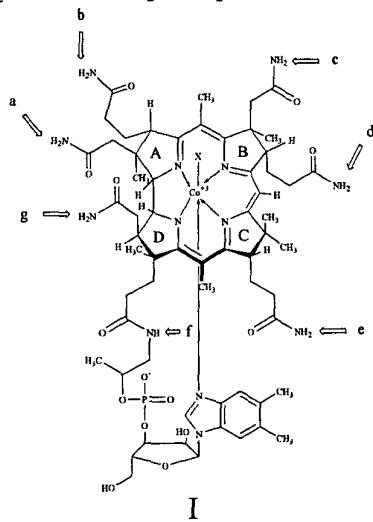
6. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked to [a residue of ]the e-carboxamide group of the compound of formula I.

7. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked to [a residue of ]the b-carboxamide group and a second [residue of a ]molecule comprising B-10 is linked to [a residue of ]the d-carboxamide group of the compound of formula I.

8. (Once amended) The compound of claim 1, wherein the [residue of a ]molecule comprising B-10 is linked to the 6-position of the compound of formula I.

24. (Once amended) The compound of claim 1, wherein the [residue of the ]compound of formula I is also linked to a linker comprising a detectable radionuclide or a therapeutic radionuclide.

25. (Twice Amended) A [residue of a] compound of formula I

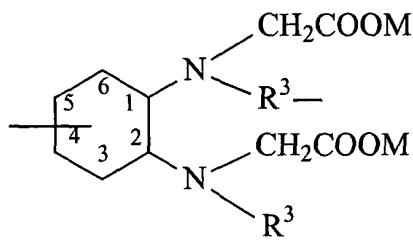


linked to [a group] one or more groups of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein Det is a chelating group comprising Gd-157; L is a linker or absent; and W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -N(R)-, -C(=O)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl; or a pharmaceutically acceptable salt thereof.

26. (Once amended) The compound of claim 25, wherein the group of the formula Q-L-W-Det is linked to [a residue of ]the b-carboxamide group, d-carboxamide group, e-carboxamide group or the 6-position of the compound of formula I.

27. (Once amended) The compound of claim 25, wherein the group of the formula Q-L-W-Det is linked to [a residue of ]the b-carboxamide group and a second group of the formula Q-L-W-Det is linked to [a residue of ]the d-carboxamide group of the compound of formula I.

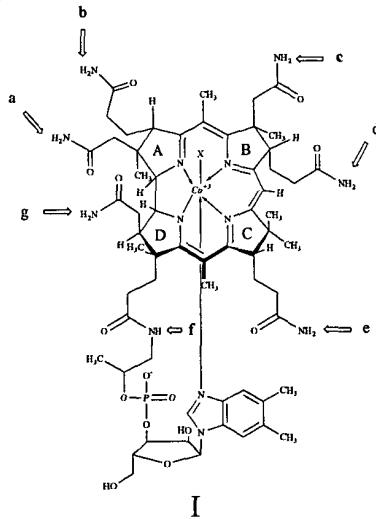
29. (Once Amended) The compound of claim 25, wherein at least one chelating group is ethylenediaminetetraacetic acid (EDTA); diethylenetriaminepentaacetic acid (DTPA); 1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid (DOTA); 1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraacetic acid (TETA); 1,4,8,12-tetraazacyclopentadecane-N,N',N'',N'''-tetraacetic acid (15N4); 1,4,7-triazacyclononane-N,N',N''-triacetic acid (9N3); 1,5,9-triazacyclododecane-N,N',N''-triacetic acid (12N3); N-[N-[N-[benzoylthio] acetyl]glycyl]glycyl]glycine (MAG3); or a cyclohexane-based metal chelator (DCTA) of the formula



wherein  $\text{R}^3$  may be  $(\text{C}_1\text{-C}_4)$ alkyl or  $\text{CH}_2\text{CO}_2^-$  [EDTA, DTPA, DOTA, DOTMP, TETA, MAG3, or DCTA].

30. (Once Amended) The compound of claim 25, wherein at least one chelating group is diethylenetriaminepentaacetic acid (DTPA) comprising Gd-157.

31. (Twice Amended) A [residue of a] compound of formula I



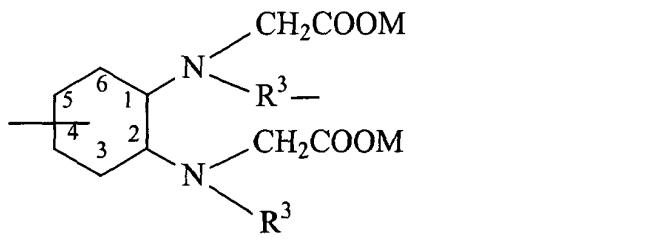
linked to [a residue of] a molecule comprising B-10; wherein the [residue of the] compound of formula I is linked to a group of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein

- 4) Det is a chelating group comprising a therapeutic radionuclide or a diagnostic radionuclide;
- 5) L is a linker or absent; and
- 6) Q and W are each independently  $-N(R)C(=O)-$ ,  $-C(=O)N(R)-$ ,  $-OC(=O)-$ ,  $-C(=O)O-$ ,  $-O-$ ,  $-S-$ ,  $-S(O)-$ ,  $-S(O)_2-$ ,  $-C(=O)-$ ,  $-N(R)-$ , or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;

or a pharmaceutically acceptable salt thereof.

33. (Once amended) The compound of claim 31, wherein a molecule comprising B-10 is linked to [a residue of] a b-carboxamide group, d-carboxamide group, e-carboxamide group or the 6-position of the compound of formula I.

34. (Once Amended) The compound of claim 31, wherein at least one chelating group is ethylenediaminetetraacetic acid (EDTA); diethylenetriaminepentaacetic acid (DTPA); 1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid (DOTA); 1,4,8,11-tetraazacyclotetradecane-N,N',N'',N'''-tetraacetic acid (TETA); 1,4,8,12-tetraazacyclopentadecane-N,N',N'',N'''-tetraacetic acid (15N4); 1,4,7-triazacyclononane-N,N',N''-triacetic acid (9N3); 1,5,9-triazacyclododecane-N,N',N''-triacetic acid (12N3); N-[N-[N-[(benzoylthio) acetyl]glycyl]glycyl]glycine (MAG3); or a cyclohexane-based metal chelator (DCTA) of the formula



wherein R<sup>3</sup> may be (C<sub>1</sub>-C<sub>4</sub>)alkyl or CH<sub>2</sub>CO<sub>2</sub><sup>-</sup> [EDTA, DTPA, DOTA, DOTMP, TETA, MAG3, or DCTA].

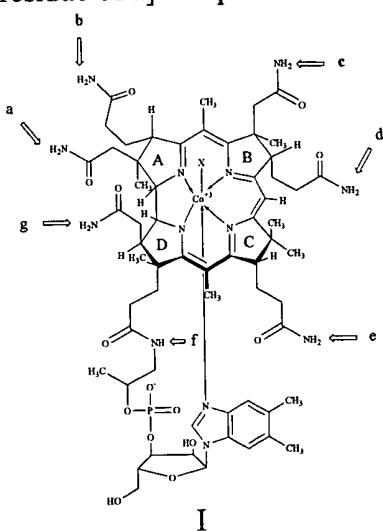
35. (Once Amended) The compound of claim 31, wherein at least one chelating group is diethylenetriaminepentaacetic acid (DTPA) comprising Gd-157.

40. (Once amended) The compound of claim 31, wherein the [residue of a ]molecule comprising B-10 is directly linked to the 6-position or to [the residue of ]the b, d or e-carboxamide group of the compound of formula I.

41. (Once amended) The compound of claim 31, wherein the [residue of a ]compound of formula I is linked to the [a residue of a ]molecule comprising B-10 through a linker.

53. (Once amended) The compound of claim 48, wherein the linker is linked to the 6-position of the compound of formula I or is linked to the b-, d- or e-carboxamide group of the compound of formula I.

65. (Twice Amended) A [residue of a] compound of formula I



linked

- 5) to a molecule comprising B-10 or a chelating group comprising Gd-157; and
- 6) to at least one [residue] molecule of the formula Q-L-W-Det, wherein X is CN, OH, CH<sub>3</sub>, adenosyl, a molecule comprising B-10 or Q-L-W-Det; wherein each Det is independently a chelating group comprising a metallic radionuclide; each L is independently a linker or absent; and each W and Q are each independently -N(R)C(=O)-, -C(=O)N(R)-, -OC(=O)-, -C(=O)O-, -O-, -S-, -S(O)-, -S(O)<sub>2</sub>-, -C(=O)-, -N(R)-, or a direct bond; wherein each R is independently H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;

or a pharmaceutically acceptable salt thereof.

66. (Twice Amended) The compound of claim 1 or 44, wherein the [residue of the] compound of Formula I is also linked to a group comprising Gd-157.

68. (Twice Amended) A [pharmaceutical] composition comprising a compound of any one of claim 1-53 or 65-67 and a pharmaceutically acceptable carrier.